WILDLIFE MANAGEMENT UNIT 16 - MANTI-NEBO

SUBUNIT 16B - MANTI-NEBO, MANTI NORTH

Boundary Description

Utah, Sanpete, Emery and Carbon counties - Boundary begins at Highway SR-10 and Highway SR-31 in Huntington; then north of SR-10 to Highway US-6; northwest on US-6 to Highway US-89; south on US-89 to SR-31; southeast on SR-31 to Huntington.

Management Unit Description

Management Unit 16B covers both the east and west slopes of the Wasatch Plateau that lie within the above listed unit boundaries. The western portion of this unit was monitored in 2002 which includes the area from Soldier Summit west to Highway 89, and then south to Fairview. The east side of this management unit is monitored as part of the Southeastern Region rotation that was last read in 1999, and will be reread in 2004. The range trend studies in management unit 16B were established in 1989 and reread in 1997 and 2002. These studies completed the establishment of permanently-marked range trend studies in the Division's Central Region. Sites were selected based on recommendations of local Interagency personnel with some being placed on old 1978 line-intercept (LI) studies. The majority of the studies monitor winter ranges along Highway 89 from Spanish Fork Canyon to Fairview. A few studies monitor transitional and summer ranges along Skyline Drive on top of the Wasatch Plateau. Elk are an increasingly important factor on these units. Several studies were established in consideration of the importance of monitoring critical elk habitat.

The availability of winter range and it's condition and productivity have always been an issue on these important deer herd units in central Utah. Due to location and access, a large number of hunters use these units and they continue to contribute an important portion of the yearly statewide deer harvest. The majority of the critical winter range in subunit 16B is found along highway corridors (U.S. 6 in Spanish Fork Canyon and Highway 89 from Spanish Fork Canyon to Fairview) and adjacent to agricultural areas. As a result, two issues facing wildlife managers in this unit are crop depredation and highway mortality. Nearly all of the Division owned lands (WMA's) in this unit were purchased to try to minimize the effects of these two factors on wildlife herds. Habitat management objectives for this unit include working with federal agencies, local governments, and private landowner's to achieve long term habitat protection and preservation.

SUMMARY

WILDLIFE MANAGEMENT UNIT 16B - MANTI-NEBO, MANTI NORTH

Trend studies in this management unit were established in 1989 and reread in 1997 and 2002. Two studies, East Dairy Fork (16B-7) and Oak Creek (16B-12) were not sampled in 2002. The studies in this unit primarily monitor sagebrush, mountain brush, and chained pinyon-juniper communities.

Unit wide vegetation trends during the 2002 reading include changes in both the browse component as well as the herbaceous understory. Browse trends were stable on 7 sites, downward on 3 sites, and upward on 1 site in 2002. The key browse on some studies, especially those where big sagebrush is present, showed increases in decadence and poor vigor. Herbaceous understory trends were downward on 8 sites and stable on 4 sites. The major change occurring with herbaceous species was the reduction in perennial forbs. All 12 studies that were sampled in 2002 showed decreases in the sum of nested frequency for perennial forbs. Perennial grasses remained stable or increased in nested frequency on 7 sites, and decreased on 5 sites. Annual species showed mixed trends as far as increases/decreases are concerned. The number of herbaceous species sampled also declined on many sites in 2002. The loss of abundance and number of species sampled in 2002 is a direct result of the drought conditions experienced in 2001 and 2002.

Precipitation, both the annual total and seasonal distribution, plays an important role in vegetation trends. Data from two weather stations within the boundaries of unit 16B, Fairview 8N and Scofield-Skyland Mine, was summarized for precipitation patterns over the past two decades. Both stations show normal or above-normal annual precipitation during the early to mid 1980's, followed by below normal annual precipitation during the late 1980's and into the early 1990's. Annual totals were again normal or above normal until the current drought cycle began during the past few years. Seasonal distribution of precipitation (spring vs. fall) may have a bigger impact on vegetation trends than total annual precipitation does. Analysis of the weather station data showed that spring precipitation was below normal at both locations from 2000-2002. Spring precipitation is essential in order for cool season perennial species to be able to germinate and be productive. Below normal spring precipitation for three consecutive seasons prior to the 2002 sample helps explain the downward herbaceous understory trends on the majority of the studies in unit 16B. As explained in the site narratives, all of the studies in this unit showed a decrease in sum of nested frequency for perennial forbs in 2002. Also, increases in percent decadence, reduced vigor, and low reproduction in shrub populations can result from dry periods.

A summary table of the trends follows.

Trend Summary

	Category	1989	1997	2002
16B-1 Long Ridge South	soil	est	4	3
	browse	est	2	2
	herbaceous understory	est	4	2
16B-2 Long Ridge North	soil	est	3	3
	browse	est	4	3
	herbaceous understory	est	4	1
16B-3 Rocky Hollow	soil	est	3	3
	browse	est	3	3
	herbaceous understory	est	4	2
16B-4 Dry Creek Chaining	soil	est	2	2
	browse	est	3	2
	herbaceous understory	est	1	1
16B-5 Jackson Unit	soil	est	4	3
	browse	est	2	3
	herbaceous understory	est	3	2
16B-6 Mill Fork	soil	est	3	3
	browse	est	5	3
	herbaceous understory	est	3	2
	Category	1989	1999	2002
16B-8 Starvation Mahogany	soil	est	3	3
	browse	est	3	3
	herbaceous understory	est	3	3
16B-9 Starvation Mountain Brush	soil	est	2	2
	browse	est	3	3
	herbaceous understory	est	4	3

(1) = down, (2), slightly down, (3) = stable, (4) = slightly up, (5) = up
(est) = established, (n/a) = no trend, (susp) = suspended

	Category	1989	1997	2002
16B-10 Dairy Fork Burn	soil	est	3	3
	browse	est	5	4
	herbaceous understory	est	5	2
16B-11 Hilltop	soil	est	1	2
	browse	est	2	2
	herbaceous understory	est	3	2
16B-13 Oak Creek Ridge Aspen	soil	est	3	3
	browse	est	3	3
	herbaceous understory	est	5	1
16B-14 Oak Creek Ridge Seeding	soil	est	5	3
	browse	est	n/a	n/a
	herbaceous understory	est	2	3
SUSPENDED STUDIES				
16B-7 East Dairy Fork	soil	est	3	susp
	browse	est	4	susp
	herbaceous understory	est	4	susp
16B-12 Oak Creek	soil	est	3	susp
	browse	est	2	susp
	herbaceous understory	est	2	susp

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